



Patent  
Attorney's Docket No. 029430-554

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	
Tadashi ISHIDA et al.	)	Group Art Unit: (unassigned)
Application No.: 10/690,567	)	Examiner: (unassigned)
Filed: October 23, 2003	)	Confirmation No.: (unassigned)
For: RECORDING SHEET AND	)	
MANUFACTURING PROCESS	)	
THEREFOR	)	

**INFORMATION DISCLOSURE STATEMENT**  
**TRANSMITTAL LETTER**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☒ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \$\_\_\_\_\_ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \$\_\_\_\_\_ is enclosed for the fee due.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

Date: January 23, 2004

By: Robert G. Mukai  
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THEREFOR )

**SECOND INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, applicants hereby submit an Office Action dated October 24, 2003 in the corresponding Chinese application and the documents cited therein (to the extent not previously provided in the prior Information Disclosure Statement) in conformance with the provisions of 37 C.F.R. §§ 1.97 and 1.98.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

**CERTIFICATION UNDER 37 C.F.R. §1.97(e)**

I, the undersigned, hereby certify that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: Robert G. Mukai  
Robert G. Mukai  
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Alexandria, Virginia 22313-1404  
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Date: January 23, 2004



CPCH0163749P

## Patent Office of the People's Republic of China

Address : Receiving Section of the Chinese Patent Office, No. 6 Tucheng Road West, Haidian District, Beijing, Postal code: 100088

Applicant	MITSUI CHEMICALS, INC.		Seal of Examiner	Date of Issue
Agent	China Patent Agent (H.K.) Ltd.			October 24, 2003
Patent Application No.	01801849.1	Application Date	April 27, 2001	Exam Dept.
Title of Invention	RECORDING SHEET AND MANUFACTURING PROCESS THEREFOR			

**First Office Action**

(PCT application entering into the national phase)

- ☒ Under the provision of Art. 35, para. 1 of the Patent Law, the examiner has made an examination as to substance of the captioned patent application for invention upon the request for substantive examination filed by the applicant on\_\_\_\_\_.

☐ Under the provision of Art. 35, para. 2 of the Patent Law, the Chinese Patent Office has decided to conduct an examination of the captioned patent application for invention on its own initiative.
- ☒ The applicant requests that

the filing date April 28, 2000 at the JP Patent Office be taken as the priority date of the present application,

the filing date \_\_\_\_\_ at the \_\_\_\_\_ Patent Office be taken as the priority date of the present application,

the filing date \_\_\_\_\_ at the \_\_\_\_\_ Patent Office be taken as the priority date of the present application.
- ☐ The following amended documents submitted by the applicant cannot be accepted for failure to conform with Art. 33 of the Patent Law:

☐ the Chinese version of the annex to the international preliminary examination report.

☐ the Chinese version of the amended documents submitted according to the provision of Rule 19 of the Patent Cooperation Treaty.

☐ the amended documents submitted according to the provision of Rule 28 or Rule 41

of the Patent Cooperation Treaty.

- ☐ the amended documents submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

See the text portion of this Office Action for detailed reasons why the amendment cannot be accepted.

4. ☒ Examination is conducted on the Chinese version of the Initially-submitted international application.

- ☐ Examination is conducted on the following document(s):

☐ page \_\_\_\_\_ of the description, based on the Chinese version of the initially-submitted international application documents;

page \_\_\_\_\_ of the description, based on the Chinese version of the annex to the international preliminary examination report;

page \_\_\_\_\_ of the description, based on the amended documents submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty;

page \_\_\_\_\_ of the description, based on the amended documents submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

☐ claim(s) \_\_\_\_\_, based on the Chinese version of the initially-submitted international application documents;

claim(s) \_\_\_\_\_, based on the Chinese version of the amended documents submitted according to the provision of Rule 19 of the Patent Cooperation Treaty;

claim(s) \_\_\_\_\_, based on the Chinese version of the annex to the international preliminary examination report;

claim(s) \_\_\_\_\_, based on the amended documents submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty;

claim(s) \_\_\_\_\_, based on the amended documents submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

☐ Fig(s) \_\_\_\_\_, based on the Chinese version of the initially-submitted international application documents;

Fig(s) \_\_\_\_\_, based on the Chinese version of the annex to the international preliminary examination report;

Fig(s) \_\_\_\_\_, based on the amended documents submitted according to the provision of Rule 28 or Rule 41 of the Patent Cooperation Treaty;

Fig(s) \_\_\_\_\_, based on the amended documents submitted according to the provision of Rule 51 of the Implementing Regulations of the Patent Law.

5. ☒ The following reference document(s) is/are cited in this Office Action (its/their serial number(s) will continue to be used in the subsequent course of examination):

Serial No.	Number or Title(s) of Document(s)	Date of Publication (or filing date of interfering application)
1	JP2000-118129A	April 25, 2000
2	US5670242A	September 23, 1997
3	JP2000-71604A	March 7, 2000
4		

6. Concluding comments on the examination:

☐ On the description:

☐ What is stated in the application comes within the scope of that no patent right shall be granted as prescribed in Art. 5 of the Patent Law.

☐ The description is not in conformity with the provision of Art. 26, para. 3 of the Patent Law.

☒ On the claims:

☐ Claim(s) \_\_\_\_\_ come(s) within the scope of that no patent right shall be granted as prescribed in Art. 25 of the Patent Law.

☒ Claim(s) 1-4 and 9-11 has/have no novelty as prescribed in Art. 22, para. 2 of the Patent Law.

☒ Claim(s) 5-13 has/have no inventiveness as prescribed in Art. 22, para. 3 of the Patent Law.

☐ Claim(s) \_\_\_\_\_ has/have no practical applicability as prescribed in Art. 22, para. 4 of the Patent Law.

☐ Claim(s) \_\_\_\_\_ is/are not in conformity with the provision of Art. 26, para. 4 of the Patent Law.

☐ Claim(s) \_\_\_\_\_ is/are not in conformity with the provision of Art. 31, para. 1 of the Patent Law.

☒ Claim(s) 1 and 3-12 is/are not in conformity with the provisions of Rules 20 to 23 of the Implementing Regulations.

☐ Claim(s) \_\_\_\_\_ is/are not in conformity with the provision of Art. 9 of the Patent Law.

☐ Claim(s) \_\_\_\_\_ is/are not in conformity with the provision of Rule 12, para. 1 of the

## Implementing Regulations.

See the text portion of this Office Action for detailed analysis of the above concluding comments.

7. Based on the above concluding comments, the examiner deems that
- ☐ the applicant should make amendment to the application document(s) according to the requirements put forward in the text portion of this Office Action.
  - ☐ the applicant should expound in his/its observations why the captioned patent application is patentable and make amendment to what is not in conformity with the provisions pointed out in the text portion of this Office Action, otherwise, no patent right shall be granted.
  - ☒ the patent application contains no substantive content(s) for which a patent right may be granted, if the applicant has no sufficient reason(s) to state or his/its stated reason(s) is/are not sufficient, said application will be rejected.
  - ☐

8. The applicant should note the following items:

- (1) Under Art. 37 of the Patent Law, the applicant should submit his/its observations within **four** months from the date of receipt of this Office Action; if, without any justified reason(s), the time limit for making written response is not met, said application shall be deemed to have been withdrawn.
- (2) The amendment made by the applicant to said application should be in conformity with the provision of Art. 33 of the Patent Law, the amended text should be in duplicate and its form should conform with the related provisions of the Guide to Examination.
- (3) If no arrangement is made in advance, the applicant and/or the agent shall not come to the Chinese Patent Office to have an interview with the examiner.
- (4) The observations and/or amended text should be sent to the Receiving Section of the Chinese Patent Office by mail or by personal delivery, if not sent to the Receiving Section by mail or by personal delivery, the document(s) will have no legal effect.

9. This Office Action consists of the text portion totalling 5 page(s) and of the following attachment(s):

- ☐      copy(copies) of the reference document(s) totalling      page(s).



Appl No: 01801849.1

Your Ref: MCI01P125A-KBa

Our Ref: CPCH0163749P

### Text of the First Office Action

The present patent application for invention relates to a recording sheet used for inkjet recording. After examination, the examiner's comments are provided as follows.

1. Claim 1 claims an inkjet recording sheet. Reference document 1 also discloses an inkjet recording sheet and specifically discloses the following technical features (see Column 2 Paragraph 0011 of the description). The first layer is a sheet support upon which one layer containing a cationic particulate organic component is formed, wherein the layer containing a cationic particulate organic component comprises a void-forming component consisting substantially of a cationic particulate organic component. Said cationic particulate organic component is selected from acrylate polymers, methacrylate copolymers, styrene, methyl methacrylate, ethylene-vinyl acetate copolymers and copolymers of two or more of these, which are endowed with a cationic function. Thus, it can be seen that reference document 1 has disclosed all the technical features of claim 1. The two belong to the same technical field, solve the same technical problem, adopt the same technical solution and achieve the same technical effects. Therefore, said claim does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law.
2. Claim 2 is the further restriction of claim 1, and the additional technical feature of claim 2 is that wherein the cationic particulate organic component is a thermoplastic particulate resin. Said additional technical feature has been disclosed in reference document 1 (see Column 12 Paragraph 0045 of the description). Therefore, when the claim to which claim 2 refers does not possess novelty, claim 2 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law.
3. Claim 3 is the further restriction of claim 1 or claim 2, and the additional technical features of claim 3 are that wherein the cationic particulate organic component is a cationic particulate emulsion prepared by copolymerizing (A) an alkyl (meth)acrylate, (B) an amino group containing (meth)acrylate monomer and (C) other copolymerizable monomer. Said additional technical features have been disclosed in reference document 1 (see Column 2 Paragraph 0011 of the description). Therefore, when the claims to which claim 3 refers do not possess novelty, claim 3 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law.

4. Claim 4 is the further restriction of claim 3, and the additional technical features of claim 4 are that wherein the amounts of (A) the alkyl (meth)acrylate monomer, (B) the amino group containing (meth)acrylate monomer and (C) the other copolymerizable monomer are 30 wt% to 99.8 wt%, 0.2 wt% to 40 wt% and 0 wt% to 30 wt%, respectively, based on the total weight of (A), (B) and (C). Said additional technical features have been disclosed in reference document 1 (see Column 3 Lines 18-20 of the description), wherein the percentages disclosed are 10-80% (partially overlapped with 30-99.8%), 10-80% (partially overlapped with 0.2-40%), and 2-20% (partially overlapped with 0-30%) respectively. Therefore, when the claim to which claim 4 refers does not possess novelty, claim 4 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law.

5. Claim 5 is the further restriction of any of claims 1-4, and the additional technical features of claim 5 are that wherein the glass transition temperature of the cationic particulate organic component is 65°C to 200°C both inclusive. Said additional technical features have been disclosed in reference document 2 (see Column 3 Line 55 of the description). The value range disclosed in reference document 2 is 50°C to 90°C, which is partially overlapped with that of said claim. Said additional technical features play the same role in reference document 2 as in the present invention. Therefore, reference document 2 has provided the revelation of applying said additional technical features to the technical solutions of claims 1-4 to further solve the technical problem. That is, it is obvious for a person skilled in the art to obtain the technical solution of said claim by combining reference document 1 with reference document 2. Therefore, said claim does not have prominent substantive features or a notable progress in comparison with reference documents 1 and 2, and thus does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

6. Claim 6 is the further restriction of any of claims 1-5, and the additional technical feature of claim 6 is that wherein the weight average molecular weight of the cationic particulate organic component is 60,000 or more. Said additional technical feature has been disclosed in reference document 3 (see Column 12 Paragraph 0039 of the description). The weight average molecular weight of the cationic particulate organic component disclosed in reference document 3 is more than 10,000 and less than 2,000,000, which is partially overlapped with the value range of said claim. Moreover, said additional technical feature plays the same role in reference document 3 as in the present invention. Therefore, reference document 3 has provided the revelation of applying said additional technical features to the technical solutions of claims 1-4 to further solve the technical problem. That is, it is obvious for a person skilled in the art



to obtain the technical solution of said claim by combining reference document 1 with reference document 2 and with reference document 3. Said claim does not have prominent substantive features or a notable progress in comparison with reference documents 1-3. Thus, when the claims to which claim 6 refers do not possess novelty or inventiveness, claim 6 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

7. Claim 7 is the further restriction of any of claims 1-6, and the additional technical features of claim 7 are that wherein the recording sheet has a liquid absorption of 2.00 to 4.00  $\mu\text{L}$  0.1 sec after dropping 4  $\mu\text{L}$  of pure water on its recording surface and has gloss of 50 or more at 75°C. The sheet support and the layer containing a cationic particulate organic component, both of which comprise the recording sheet, have been disclosed in reference documents 1 and 2. The components, which comprise the recording sheet and are disclosed in reference documents 1 and 2, are the same as those in claims 1-6. Therefore, it is obvious for a person skilled in the art to obtain the technical solution of said claim by adjusting the ratio among each component. Thus, when the claims to which claim 7 refers do not possess novelty or inventiveness, claim 7 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

8. Claim 8 is the further restriction of any of claims 1-7, and the additional technical features of claim 8 are that wherein the recording sheet has a liquid absorption per contact area of a droplet of 0.5 to 2.00  $\mu\text{L}/\text{cm}^2$  0.1 sec after dropping 4  $\mu\text{L}$  of pure water on the recording surface of the recording sheet. Said additional technical features are well-known common sense. See the comments on claim 7. Thus, when the claims to which claim 8 refers do not possess novelty or inventiveness, claim 8 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

9. Claim 9 is the further restriction of any of claims 1-8, and the additional technical feature of claim 9 is that wherein the layer containing the cationic particulate organic component is the outermost layer of the recording surface. Said additional technical feature has been disclosed in reference document 1 (see Column 2 Paragraph 0011 of the description). Thus, when claims 1-4 to which claim 9 refers do not possess novelty, claim 9 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law. When claims 5-8 to which claim 9 refers do not possess inventiveness, claim 9 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

10. Claim 10 is the further restriction of any of claims 1-9, and the additional

technical feature of claim 10 is that wherein the sheet support is a paper or plastic sheet. Said additional technical feature has been disclosed in reference document 1 (see Column 5 Paragraph 0017 of the description). Thus, when claims 1-4 and 9 to which claim 10 refers do not possess novelty, claim 10 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law. When claims 5-9 to which claim 10 refers do not possess inventiveness, claim 10 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

11. Claim 11 is the further restriction of any of claims 1-10, and the additional technical feature of claim 11 is that wherein the layer containing the cationic particulate organic component contains no inorganic particles. Said additional technical feature has been disclosed in reference document 1 (see Column 11 Paragraph 0043 of the description). Thus, when claims 1-4, 9 and 10 to which claim 11 refers do not possess novelty, claim 11 does not conform to the provision on novelty of Article 22, paragraph 2 of the Patent Law. When claims 5-10 to which claim 11 refers do not possess inventiveness, claim 11 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

12. Claim 12 claims a process for manufacturing the inkjet recording sheet as claimed in any of claims 1-11. Reference document 2 also discloses a process for manufacturing the inkjet recording sheet and specifically discloses the following technical features (see Column 10 Lines 34-44 of the description): applying the coating composition on a sheet support by cast coating and pressing a mirror roll onto the coated surface. The difference between claim 12 and reference document 2 is that in claim 12, the coating composition contains the cationic particulate organic component. Said distinguishing technical feature has been disclosed in reference document 1 (see Column 2 of the description). Therefore, said claim does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

13. Claim 13 is the further restriction of claim 12, and the additional technical feature of claim 13 is that wherein the surface temperature of the mirror roll is lower than a glass transition temperature of the cationic particulate organic component. Said additional technical feature has been disclosed in reference document 2 (see Column 10 Lines 37-43 of the description). In the description of reference document 2, the glass transition temperature is 80°C, and the surface temperature of the roll is 75°C. Thus, when the claim to which claim 13 refers does not possess inventiveness, claim 13 does not conform to the provision on inventiveness of Article 22, paragraph 3 of the Patent Law.

14. Claims 1, 3 and 4 do not conform to the provision of Rule 20, paragraph 4 of the Implementing Regulations of the Patent Law.

The contents in parentheses in claims 1, 3 and 4 are not reference signs, thus said claims do not conform to the provision of Rule 20, paragraph 4 of the Implementing Regulations of the Patent Law.

15. Claims 5-11 are multiple dependent claims referring to multiple dependent claims and thus do not conform to the provision of Rule 23, paragraph 2 of the Implementing Regulations of the Patent Law.

16. Claim 12 is an independent claim and refers to the preceding claims 1-11, which makes the protection scope of claim 12 have several levels. Thus, the protection scope of claim 12 is made unclear, and said claim does not conform to the provision of Rule 20, paragraph 1 of the Implementing Regulations of the Patent Law.

For the aforementioned reasons, none of the claims of the present application possesses novelty or inventiveness, which belong to the case that the application should be rejected as prescribed in Rule 53 of the Implementing Regulations of the Patent Law. Meanwhile, the description does not disclose any other substantive contents that can be granted a patent right either. Therefore, even if the applicant rearranges the claims and/or makes further restrictions to the claims according to the disclosure of the description, the present application will not have a prospect of being granted a patent right either. The present application will be rejected if the applicant fails to provide sufficient reasons that the present application possesses novelty and inventiveness in comparison with reference documents 1-3 cited by the examiner within the four-month time limit for response as prescribed in this Office Action.

JAN 23 2004

SHEET 1 OF 1

Substitute for forms 1449A/PTO &amp; 1449B/PTO

# SECOND INFORMATION DISCLOSURE STATEMENT BY APPLICANT

ATTORNEY'S DKT NO.  
029430-554

APPLICATION NO.  
10/690,567

APPLICANT  
Tadashi ISHIDA et al.

FILING DATE  
October 23, 2003

GROUP  
(unassigned)

## U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	5,670,242		Asano et al.	09-23-1997

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes	No

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.

Examiner Signature		Date Considered	
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.